

# XO Communications, Inc.

Meeting with FCC Staff

October 26, 2005

Wireless Operations in the 3650-3700  
MHz Band

[www.xo.com](http://www.xo.com)



## XO Supports Unlicensed Operations

XO Communications, Inc.

- Fewer barriers encourages entrants and technologies.
- As the FCC's decision notes, this band will be particularly useful for WISPS, who have not traditionally been able to purchase licensed spectrum.
- Licensed spectrum can be unused (at least prior to performance requirement deadlines).
  - Therefore, unlicensed use will promote immediate use of the band.

[www.xo.com](http://www.xo.com)

**Preliminary and Confidential: For Discussion Purposes Only**

©Copyright 2000 XO. All rights reserved. XO and the XO design logo are trademarks of XO Communications, Inc.



## Opposition to Unlicensed Use

XO Communications, Inc.

- Generally, opposition to unlicensed operations expressed by equipment manufacturers.
  - Potential spectrum users generally support FCC plan.
- Those manufacturers object to requirement to develop contention based technologies.
  - They desire to market current equipment.
- However, FCC should not protect manufacturers at the expense of license users and consumers of broadband services.
  - Moreover, XO's approach will permit manufacturers to deploy equipment today while industry develops contention based technologies.

[www.xo.com](http://www.xo.com)

**Preliminary and Confidential: For Discussion Purposes Only**

©Copyright 2000 XO. All rights reserved. XO and the XO design logo are trademarks of XO Communications, Inc.



## Contention Based Technologies

XO Communications, Inc.

- FCC has noted as recently as 2005 that cognitive radio techniques, such as contention based protocols, will provide more efficient and effective access to spectrum.
- FCC should not deviate from its initial decision to use contention based technologies.

[www.xo.com](http://www.xo.com)

**Preliminary and Confidential: For Discussion Purposes Only**

©Copyright 2000 XO. All rights reserved. XO and the XO design logo are trademarks of XO Communications, Inc.



## Contention Based Technologies

XO Communications, Inc.

- While contention based technologies may initially be insufficient to ensure QoS, other mechanisms are available.
  - Those mechanisms should be used today, while technology catches up with spectrum availability.
  - It is contrary to the public interest to use a less desirable licensed approach rather than an unlicensed approach based on coordination and performance standards with a “bridge” to contention based technologies.
  - While this approach rewards “first movers,” that advantage can be managed, while inevitability of deep pockets foreclosing use of the spectrum by others cannot.
- FCC should reject requests to make only some spectrum, or only some areas, unlicensed.
  - This will create different product markets, driving up the costs for 3.6 GHz equipment.

[www.xo.com](http://www.xo.com)

**Preliminary and Confidential: For Discussion Purposes Only**

©Copyright 2000 XO. All rights reserved. XO and the XO design logo are trademarks of XO Communications, Inc.



## Aids to Contention Based Technologies

XO Communications, Inc.

- Registration process.
  - Already in FCC rules.
  - Will establish first in time rights if necessary.
  - Will require subsequent users to correct interference.

[www.xo.com](http://www.xo.com)

**Preliminary and Confidential: For Discussion Purposes Only**

©Copyright 2000 XO. All rights reserved. XO and the XO design logo are trademarks of XO Communications, Inc.



## Aids to Contention Based Technologies (cont'd)

XO Communications, Inc.

- Frequency coordination.
  - Successfully used in many forms, including user based groups monitoring Part 90 spectrum.
    - Many successful forms of coordination -- some national, others local.
  - Coordinators can assess likely interference and users' needs.
    - For example, coordinators could require licensees to justify amount of spectrum requested for a single site.
    - Coordinators can assess when licensees are using compatible technologies that permit over-the-air coordination.
  - Coordination can become more sophisticated over time and take contention based technologies into consideration (or be supplanted by contention based technologies).
    - Initially may simply use traditional metrics of power and bandwidth.

[www.xo.com](http://www.xo.com)

**Preliminary and Confidential: For Discussion Purposes Only**

©Copyright 2000 XO. All rights reserved. XO and the XO design logo are trademarks of XO Communications, Inc.



## Aids to Contention Based Technologies (cont'd)

XO Communications, Inc.

- Performance standards.
  - Will prevent the “squatting” about which others are concerned.
  - Site rights may be a prerequisite to registration.
  - Equipment orders can act as a gating mechanism.
  - Construction of station within one year of registration and submission of construction report should be required.
  - FCC should also require annual web-based inventory of sites in operation.

[www.xo.com](http://www.xo.com)

**Preliminary and Confidential: For Discussion Purposes Only**

©Copyright 2000 XO. All rights reserved. XO and the XO design logo are trademarks of XO Communications, Inc.

